

Tagaloblatta kasaysayan Gen. et Sp. Nov. (Blattodea: Ectobiidae: Pseudophyllodromiinae), A New Minute Cockroach from Mt. Makiling, Los Baños, Laguna*

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ABSTRACT

KEY WORDS :

Biodiversity
Cockroach fauna
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A new ectobiid cockroach, *Tagaloblatta kasaysayan* gen. et sp. nov. from Mt. Makiling, Los Baños, Laguna is described. The new genus externally resembles the Neotropical genera *Isoldaia* Gurney & Roth 1966 and *Agmoblatta* Gurney & Roth 1966 but genital morphology shows possible close relation with *Sundablatta* Hebard 1929, *Pseudophyllodromia* Brunner 1865, and *Allacta* Saussure & Zehntner 1895. The genus can be distinguished from the other genera by the minute, non-overlapping tegmina, absence of hind wings and specialized abdominal glands, simple, posteriorly symmetrical subgenital plate and similarly-sized style.

INTRODUCTION

Ectobiidae (Dictyoptera: Blattodea) is the largest cockroach family in the Philippines with 54 of the 123 recorded cockroach species (Lucañas and Lit 2015). Only three of the six Ectobiidae subfamilies (Anaplectinae, Blattellinae and Pseudophyllodromiinae) are recorded in the country. Pseudophyllodromiinae is the largest with 27 species, 20 of which are endemic to the Philippines (Lucañas and Lit 2015). The subfamily is distinguished from other Ectobiids by the hook-like right phallomere.

Much of the Philippine cockroach fauna still remains to be described. In fact, the subfamily Anaplectinae has only just been recorded in the country with a new species from Mt Makiling (Lucañas, 2016). On a nocturnal collection in the Hortorium of the University of the Philippines Los Baños - Museum of Natural History (UPLB-MNH), several minute cockroaches were observed under barks of fallen branch (Figure 1A). These were initially thought to be nymphs but upon closer observation were found to comprise a new taxon. Here, it is described as *Tagaloblatta kasaysayan* Lucañas, a new genus and species.

MATERIALS AND METHODS

Specimens collected at the UPLB-MNH – Hortorium were preserved in 95% ethyl alcohol. Male specimens were mounted on microscope slides using Canada Balsam while other specimens were double mounted with micropins.

Measurements used were similar to that of Lucañas and Lit (2016). Standard deviations for each measurement were also noted. Terminologies used for male genitalia follow Klass (1997) and Roth (2003) for other characters. Illustrations were made by tracing printed photomicrographs of specimens. The degree of sclerotization and pigmentation was made through line thickness and by stippling. All specimens were deposited at the Entomological Collections of the UPLB-MNH.

TAXONOMY

Family: Ectobiidae Brunner

Subfamily: Pseudophyllodromiinae Kirby

Genus: *Tagaloblatta* Lucañas gen. nov.

Diagnosis: Sexual dimorphism absent; Minute (Figure 1B-C); Vertex slightly exposed; Profemur somewhat intermediate between Type A₁ (row of stout spines terminating in one large spine) and B₁ (one or more proximal stout spines followed by a row of piliform spinules of uniform length, terminating in one large spine), but closer to B. Tegmina reduced to small trapezoidal lobes; hindwings absent. Tarsal claws simple, symmetrical. Arolium and pulvilli absent on all legs. Abdominal tergites

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Figure 1. Habit of *Tagaloblatta kasaysayan* Lucañas n. sp.: (A) Portion of the UPLB-MNH Hortorium where the species was observed; (B) Adult male; (C) Adult female preparing to deposit its oothecae.

unspecialized. Styles present, equal in size. Supra-anal plate, entire. Subgenital plate posteriorly symmetrical.

Externally similar to Blattellinae genera *Loboptera* Brunner 1865 and *Lobopterella* Princis 1957 but the hook-like right phallomere and non-rotated ootheca (Figure 1C) places *Tagaloblatta* under the subfamily Pseudophyllodromiinae. Similar to South American genera, *Agmoblatta* Gurney & Roth 1966 and *Isoldaia* Gurney & Roth 1966 in the following characters: tegmen reduced to small lateral trapezoidal pads; wings absent; profemur type B; tarsal claws simple, symmetrical; style present. Differs from *Agmoblatta* and *Isoldaia* in the following characters: profemur B₁; pulvilli and arolium absent; male abdominal tergites unspecialized. Despite such similarities, the structure of the male genitalia greatly differs, indicating that they are not closely related.

Bifurcate L2, setal brushes on L2d and shape of subgenital plate may suggest possible close relation with *Sundablatta* Hebard 1929, *Pseudophyllodromia* Brunner 1865, and *Allacta* Saussure & Zehntner 1895 (Roth 1996). Differs from the three in terms of the reduced, trapezoidal tegmina, absence of hind wings, arolium and pulvilli on all legs.

Distribution: Philippines.

Etymology: Derived from the ethnic group "Tagalogs" which inhabit the southern region of Luzon; and "blatta" which refers to cockroaches.

Type species: *Tagaloblatta kasaysayan* Lucañas sp. nov., here designated.

Species: *Tagaloblatta kasaysayan* Lucañas sp. nov. (Figure 1B-C; 2)

Material Examined: *Holotype*: 1 male, Philippines: Luzon: Mt. Makiling, Los Baños, Laguna 10.viii.2016 (CCLucañas, UPLBMNH BLA-00664, ♂, mounted on slide). *Paratypes*: 4 male, 2 female, data same as holotype (CCLucañas, UPLBMNH BLA-00665-00667, ♂ (slide); 00668, ♂; 00669-00670, ♀).

Distribution: Philippines: Luzon, Laguna (Mt. Makiling).

Diagnosis: (same as genus).

Description: *Size (mm):* ♂, Total length: 5.48 ± 0.16; Pronotum (length x width): 1.84 ± 0.09 x 2.92 ± 0.11; Tegmina: 1.00. ♀ Total length: 5.4 ± 0.14; Pronotum (length x width): 1.85 ± 0.07 x 3.1 ± 0.14; Tegmina: 1.20.

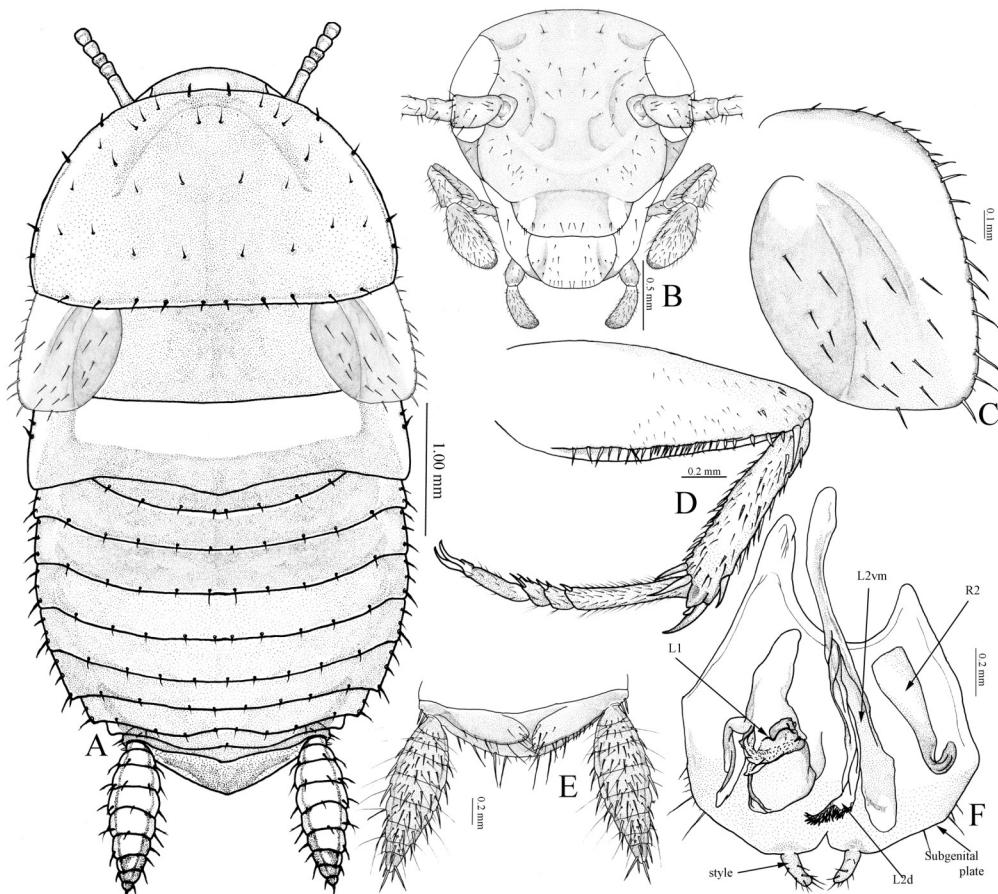


Figure 2. *Tagaloblatta kasaysayan* Lucañas n. sp. Holotype: (A) Male habitus; (B) Head; (C) Right tegmen; (D) Profemur; (E) Supra-anal plate; (G) Male subgenital plate and genitalia. (Acronyms: L1: Left phallomere sclerites; L2d: L2 dorsal; L2vm: L2 ventromedial; R2: Right phallomere sclerites).

Male: (Figure 1B; 2A-F) Minute. Dark brown except hyaline yellow metanotum, legs and cerci, lateral areas of pronotum and tegmen. Vertex slightly exposed; Eyes extending slightly below the antennal socket. Ocelli absent. With parabolic interocular band on frons (Figure 2B); Pronotum suboval. Tegmina reduced to small subtriangular lobes, weakly venated; hindwings absent (Figure 2C). Profemur B_1 (one or more proximal stout spines followed by a row of piliform spinules of uniform length, terminating in one large spine; Figure 2D). Tarsal claws simple, symmetrical. Arolium and pulvilli absent on all legs. Abdominal tergites unspecialized. Styles present, equal in size (Figure 2E).

Subgenital plate posteriorly symmetrical with interstyler emargination (Figure 2F). Style short, curving inward. R2 hook-like. L2 bifurcate. L2vm rounded apically. L2d basally twisted, with setal brushes.

Female: (Figure 1C) Similar to male, except with its subgenital plate entire.

Etymology: Derived from the Filipino term “kasaysayan”, which means “history” referring the UPLB-Museum of

Natural History which manages and maintains the Hortorium, a portion of the Molawin Creek where the specimens were collected; and in recognition of its efforts in maintaining the largest entomological repository in the country.

Ecology: This nocturnal species was collected from a decaying fallen tree branch. The individuals were hiding under the crevices of the sloughing bark that seemed to be previously inhabited by termites. It is uncertain if the species is canopy dwelling that was carried when the branch fell during a typhoon, or if they are indeed inquilinous to the abandoned termite tunnels.

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